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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,540	10/12/2001	Genady Grabarnik	YOR920010746US1	1483

7590 10/31/2006

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EXAMINER
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LIN, KELVIN Y

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/976,540

Applicant(s)

GRABARNIK ET AL.

Examiner

Kelvin Lin

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **Detailed Action**

### ***Response to Remarks***

1. Applicant's arguments, see Remarks page 11, filed on July 31, 2006, with respect to the Hellerstein reference is not a proper prior art reference for a 103(A) rejection is not persuasive. The reasons are listed as follows:

Applicant has attempted to disqualify reference Hellerstein et al., (U.S. PG Pub No. 2002/0073195) under 35 U.S.C. 103(c) by showing that the invention was owned by, or subject to an obligation of assignment to, the same entity as Hellerstein et al., (U.S. PG Pub No. 2002/0073195) at the time this invention was made. However, applicant has failed to provide a statement that the application and the reference were owned by, or subject to an obligation of assignment to, the same person at the time the invention was made in a conspicuous manner, and therefore, is not disqualified as prior art under 35 U.S.C. 103(a). Applicant must file the required evidence in order to properly disqualify the reference under 35 U.S.C. 103(c). And the statement concerning common ownership should be clear and conspicuous (e.g. on a separate piece of paper or in a separately labeled section). See MPEP § 706.02(I)(2), Section II.

In addition, applicant may overcome the applied art either by a showing under 37 CFR 1.132 that the invention disclosed therein was derived from the inventor of this application, and is therefore, not the invention "by another," or by antedating the applied art under 37 CFR 1.131.

Therefore, the ground rejections of Claims 4-6 are maintained under 35 U.S.C 103(a) as being unpatentable over Cookmeyer in view of Hellerstein et al., (U.S. PG Pub No. 2002/0073195) as addressed at previous Office Action filed on April 27, 2006.

2. However, upon further consideration, a new ground(s) of rejection is made in view of Ma et al (Publication, Ma et al., Mining Event Data for Actionable Patterns, IBM T.J. Watson Research Center, NY, year 2000).

**Remark:** In order to identify whether the publication qualify for 102(a) or (b)), the Examiner requests the date information from the applicant about the publication "Mining Event Data for Actionable Patterns" mentioned above. Because it only shows the published year 2000 and without date.

3. Applicant's arguments with respect to claims 1, 7, 13,15, and 17 have been considered but they are not persuasive.

4. The Applicant is arguing the following:

- 1) Cookmeyer does not disclose a combined off-line automatic data analysis and off-line rule management methodology, as in he claimed invention.

As to point (1), Applicant argues that Cookmeyer only use the term off-line in the context of "expert analysis", and does not discloses in the context of a combined automatic data analysis and rule management methodology, it has been considered but is not persuasive. First, Applicant equates "run time" to "online", and "design time" to "offline" are misleading. Run time is defined as the time period during which a program is running; online is defined as in reference

to one or more computers connected to a network; and off-line is defined as in reference to one or more computers disconnected to a network (See Microsoft Software Dictionary). Secondly, Cookmeyer discloses that the rules based expert analysis system for network includes a combination of algorithm (corresponding to automatic data analysis) and heuristic rules (Abstract), at col.3, l.17-21, the present invention a knowledge based expert analysis system includes a rules based inference engine comprising a plurality algorithm grouped in one or more categories of defined network performance criteria (corresponding to rule management methodology). As a consequence, at col.5, l.40-44, the expert system performs the diagnostic assessment (corresponding to rule management methodology) in accordance with an expert analysis algorithm (corresponding to automatic data analysis), either as an "on the fly" or in an off-line manner on captured performance data files. Moreover, at col.5, l.58-62, Cookmeyer discloses that the expert analysis of captured performance data from different vendor type protocol to perform offline protocol analysis.

Therefore, Cookmeyer does disclose the expert system performing the combined of off-line diagnostic assessment (corresponding to rule management methodology) and off-line expert analysis algorithm (corresponding to automatic data analysis).

## **Response to Amended Claims**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3, 15-18 are rejected under 35 USC 102(e) as being anticipated by Cookmeyer II et al., (U.S. Patent 6529954).
2. Regarding claim 1, Cookmeyer teaches apparatus for providing decision support to an analyst in accordance with an event management system which manages a network with one or more computing devices, the apparatus comprising: at least one processor operative to perform (Cookmeyer, col.4, l.9-11):
  - an automated off-line analysis of data representing past events associated with the network of computing devices being managed by the event management system, the automated analysis comprising generation of one or more visualizations of one or more

portions of the past event data and discovery of one or more patterns in the past event data (Cookmeyer, col.3, l.17-38, in which a knowledge based expert analysis corresponds to a automated analysis system, col.5, l.58-67, col.21, l.47-55, hereafter, the offline implementation will refer to ); and

- automated rule management comprising construction and validation of one or more rules formed in accordance with the automated off-line analysis of the past event data, wherein one or more rules are constructed offline and validated offline based directly on at least a portion of the one or more visualization generated offline from the corresponding offline analysis of the one or more portion of the past event data and the offline discovery of at least a portion of the one or more patterns in the past event data (Cookmeyer, Fig.9, col.3, l.17-20, l.32-38, col.4, l.60, col.5, l.58-67, and col.21, l.51-52, col.22, l.13-33); and
- memory, coupled to the at least one processor, which stores at least a portion of results associated with the automated event off-line analysis and off-line rule management operations (Cookmeyer, col.7, l.15-24)

3. Regarding claim 2, Cookmeyer further discloses the apparatus of claim 1, Wherein,  
the past event data is obtained from an event database and the one or more

rules are provided to a rule database, the event database and the rule database being associated with an execution system of the event management system.

(Cookmeyer, col.25, l.37-43).

4. Regarding claim 3, Cookmeyer further discloses the apparatus of claim 2,

Wherein,

generation of the one or more visualizations of the one or more portions of the past event data further comprises:

- selecting a subset of the past event data from the event database (Cookmeyer, col.22, l.13-33);
  - generating a visualization of the subset of past event data using a visualization tool (Cookmeyer, col.21, l.47-55);
  - the analyst reviewing the visualization to determine whether there are any groupings of events that are of interest presented therein (Cookmeyer, col.22, l.34-38);
- and
- performing an appropriate action when an event grouping of interest is found (Cookmeyer, col.22, l.41-47).

5. Regarding claims 15-16 have similar limitations as claims 1-2, the difference is one is claimed for apparatus, and the other is claimed for means function. Therefore, claims 15-16 are rejected for the same reasons set forth in the rejection of claims 1-2.



6. Regarding claims 17-18 have similar limitations as claims 1-2, the difference is one is claimed for apparatus, and the other is claimed for event support system. Therefore, claims 17-18 are rejected for the same reasons set forth in the rejection of claims 1-2.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-6 are rejected under 35 U.S.C 103(a) as being unpatentable over Cookmeyer in view of Ma et al (Publication, Ma et al., Mining Event Data for Actionable Patterns, IBM T.J. Watson Research Center, NY, year 2000).
8. Regarding claim 4, Cookmeyer teaches features of the invention substantially as claimed, discovery of the one or more patterns in the past event data, selecting a subset of the past event data from the event database (Cookmeyer, col.22, l.50-63); generating a visualization of the one or more patterns using a visualization tool (Cookmeyer, col.22, l.61-63, statistics corresponds to the pattern).the analyst reviewing the visualization to determine whether there are any patterns of interest presented therein (Cookmeyer, col.23, l.1-10); and performing an appropriate

action when a pattern of interest is found (Cookmeyer, col.23, l.28-33). Although the above mentioned prior art teaches event analysis using visualization, it does not include the mining algorithm.

However, Ma teaches mining the subset of the past event data to discover the one or more patterns using a mining tool (Ma, page 4, section 2, algorithm 1).

Because knowing the offline event analysis of event management (Ma, fig. 1) uses event flow data to discover one or more patterns using a mining tool. (see Ma, page 5, 5th paragraph), which can be used to modify the select the data source as an off-line analysis of a capture data file and set-up software filter. (see Cookmeyer, col.21, l.38-46). It would have been obvious to one ordinary skilled in the art at the time the invention was made to incorporate the teaching of Howard for data mining algorithm as is well-known in the art to discovery patterns of interest with Cookmeyer's problem filter (discovery) structure. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention.

9. Regarding claim 5, Ma further discloses the apparatus of claim 2, wherein validation of the one or more rules farther comprises :

- selecting a subset of the past event data from the event database (Ma, page 4, 4th paragraph );
- finding one or more instances of patterns expressed in terms of left-hand sides of rules (Ma, page 2, 2<sup>nd</sup> , and 3<sup>rd</sup> paragraph);

Art Unit: 2142

- generating a visualization of the one or more pattern instances using a visualization tool (Ma, page 2, 3<sup>rd</sup>, and 4<sup>th</sup> paragraphs);
- analyzing the left-hand sides of rules using a rule validation tool (Ma, page 1, fig. 1 );
- displaying results of the analysis operation (Ma, fig. 3);
- the analyst assessing analysis results (Ma, page 3, 1<sup>st</sup> paragraph); and
- marking the rules as one of validated and not validated based on the assessment by the analyst (Ma, page 9, fig. 6).

10. Regarding claim 6, Ma further discloses the apparatus of claim 2, wherein construction of the one or more rules further comprises:

- selecting a subset of the past event data from the event database (Ma, page 6, 2<sup>nd</sup> paragraph);
- mining the subset of the past event data to discover the one or more patterns using a mining tool (Ma, page 6, 3<sup>rd</sup> paragraph);
- assessing significance of the one or more patterns using a visualization tool (Ma, page 2, 3<sup>rd</sup> paragraph);
- constructing the one or more rules from a selected subset of the one or more patterns using a rule construction tool (Ma, page 3, 3<sup>rd</sup> paragraph); and
- writing the one or more rules in the rule database (Ma, page 10, 1<sup>st</sup> paragraph).

11. Regarding claims 7-12 have similar limitations as claims 1-6, the difference is one is claimed for apparatus, and the other is claimed for method.  
Therefore, claims 7-12 are rejected for the same reasons set forth in the rejection of claims 1-6.
12. Regarding claims 13-14 have similar limitations as claims 7-8, the difference is one is claimed for method, and the other is claimed for manufacture.  
Therefore, claims 13-14 are rejected for the same reasons set forth in the rejection of claims 7-8.
13. Regarding claim 19, Ma further discloses an event management decision support system for providing decision support to an event management system which manages a network with one or more computing devices, the system comprising (Ma, fig. 1):  
an event analysis module, further comprising an event mining module and an event visualization module, wherein the event mining module discovers patterns in event data, and wherein the event visualization module provides a mechanism for visualizing at least a result of a pattern discovery and a rule analysis (Ma, fig. 1, element block of EventAnalyzer); and  
a rule management module, further comprising a rule validation module and a rule construction module (Ma, fig. 1, element box of Rule Generator), wherein the rule validation module maintains consistency of at least a rule with the event data (Ma, pgae 8, ninth, and tenth paragraphs), and wherein the rule

construction module provides a mechanism for constructing one or more rules based on event patterns mined by the event mining module; wherein the one or more rules are constructed offline by the rule construction module and validated offline by the event visualization module from the corresponding offline analysis of one or more portions of the event data and the offline discovery of at least a portion of the one or more patterns in the event data by the event mining module (Ma, page 2, 3<sup>rd</sup>, and 4<sup>th</sup> paragraph, page 3, 3<sup>rd</sup> paragraph).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 571-272-3898. The examiner can normally be reached on Flexible 4/9/5.

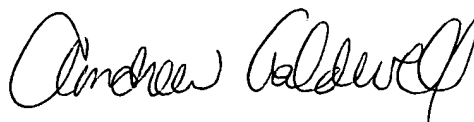
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2142

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/23/06  
KYL

A handwritten signature in black ink, appearing to read "Andrew Caldwell". The signature is fluid and cursive, with the first name "Andrew" and last name "Caldwell" clearly distinguishable.

ANDREW CALDWELL  
PATENT EXAMINER